CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

COMPLAINT NO. R2-2006-0012

ADMINSTRATIVE CIVIL LIABILITY
IN THE MATTER OF
SANITARY SEWER OVERFLOWS
CITY OF SOUTH SAN FRANCISCO
SAN MATEO COUNTY

The Executive Officer of the California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter the "Water Board"), hereby gives notice that:

1. The City of South San Francisco (hereinafter "Discharger") has violated provisions of law for which the Water Board may impose civil liability pursuant to California Water Code ("CWC") Sections 13385(a)(2) and Section 13323.

2. The Discharger is a permittee under NPDES Permit No. CA0038130, Order No. R2-2003-0010, which prohibits the overflow of untreated or partially treated wastewater to waters of the State from the Discharger's collection system or pump stations tributary to the South San Francisco and San Bruno Water Quality Control Plant (Discharge Prohibition A.3).

3. Unless waived, a hearing on this complaint will be held before the Water Board on June 14, 2006, at the Elihu M. Harris State Building, First Floor Auditorium, 1515 Clay Street, Oakland. The Discharger or its representative will have an opportunity to be heard and contest the allegations in this complaint and the imposition of the civil liability. An agenda for the meeting will be mailed to the Discharger not less than 10 days before the hearing date. The deadline to submit all written comments and evidence concerning this complaint is May 19, 2006, 5 p.m. Any written comments and evidence not so submitted will not be considered by the Water Board.

4. At the hearing, the Water Board will consider whether to affirm, reject, or modify the proposed civil liability, to refer the matter to the Attorney General for recovery of judicial liability, or take other enforcement actions.

ALLEGATIONS

5. This complaint is based on the following facts:

   a. At 8:05 a.m. on December 27, 2004, at the peak of a rainstorm, the San Mateo Avenue Sanitary Sewer Pump Station (PS No. 9) located at 1479 San Mateo Avenue, South San Francisco, went off-line. Once the station stopped pumping, untreated sanitary sewage overflowed into Colma Creek from manholes located on the site of the pump station adjacent to Colma Creek and from numerous manholes in South San Francisco. The manholes are part of the Discharger's collection system, which is comprised of the pipes, pump stations, sewer lines and other conveyances, upstream of its wastewater treatment plant headworks used to collect and convey wastewater to its treatment facility. Colma Creek is a tributary of lower San Francisco Bay. The

Discharger attributes PS No. 9's failure to the malfunction of critical, newly installed equipment. The Discharger reported an estimated volume of un-recovered sewage overflow at 1,805,600 gallons, which ultimately flowed into Colma Creek and San Francisco Bay.

b. Besides the December 27, 2004, SSO, the Discharger had 146 other incidences of unauthorized discharges or sanitary sewer overflows (SSOs) of untreated sewage from its collection system, totaling 185,914 gallons of untreated sewage to waters of the state from May 1, 2003, through March 1, 2006. Therefore, including the December 27, 2004, SSO, the total volume of untreated sewage discharged to waters of the state is 1,991,514 gallons. The description of the SSOs is included in Table 1. The causes of these releases include sewer blockages, equipment failures, and insufficient transmission capacity.

PROPOSED CIVIL LIABILITY

6. For violating CWC Section 13385(a)(2), the Water Board may impose civil liability administratively pursuant to CWC, Chapter 5, Article 2.5 (commencing at Section 13323) in an amount not to exceed the sum of both the following:

   a. $10,000 for each day in which a violation occurred; and
   b. $10 for each gallon of discharge that is not susceptible to cleanup or is not cleaned up in excess of 1,000 gallons.

   If this matter is referred to the Attorney General for judicial enforcement, a higher liability of $25,000 per day of violation and $25 per each gallon of discharge that is not susceptible to cleanup or is not cleaned up in excess of 1,000 gallons may be imposed.

   The maximum administrative civil liability for the violations is $10,000 times 147 SSO events (days) plus $10 times 1,962,692 gallons or $21,096,920.

7. In determining the amount of civil liability to be assessed to the City of South San Francisco, the Water Board must take into consideration the factors described in CWC Section 13385(e). The factors described include:

   - the nature, circumstances, extent, and gravity of the violation or violations,
   - whether the discharge is susceptible to cleanup or abatement,
   - the degree of toxicity of the discharge,
   - with respect to the discharger, the ability to pay and the effect on ability to continue in business,
   - any voluntary cleanup efforts undertaken,
   - any prior history of violations,
   - the degree of culpability,
   - the economic savings, if any, resulting from the violation, and
   - other such matters as justice may require.

   <u>Nature, Circumstance, Extent and Gravity of the Violations</u>

   Many of the 147 SSOs that occurred from May 1, 2003, through March 1, 2006, were caused by the blockage of sewers from grease, roots, paper and construction debris. These SSOs amounted to 1,991,514 gallons of untreated sewage flowing to storm sewers, Colma Creek and eventually San Francisco Bay.

The largest SSO of an estimated 1.8 million gallons (MG) was caused by a pump station failure. On December 27, 2004, around 8:05 a.m. at the peak of a rainstorm, PS No. 9 located at 1479 San Mateo Avenue, South San Francisco, went off-line due to the malfunction of critical, newly installed equipment. Once the station stopped pumping, sanitary sewage overflowed into Colma Creek from manholes located on the site of the pump station adjacent to Colma Creek and from numerous manholes in South San Francisco. Sewage quickly filled the low spots at the pump station construction site and flowed into the creek from several locations across the construction roadway. Water was only an inch or two deep but flowed from a wide area along the construction roadway into the creek.

Since October 19, 2004, PS No. 9 had been in partial service while under construction to increase the capacity from 15 million gallons per day (MGD) to 30.3 MGD. The Discharger's report of the SSO incident indicated that a factor in the failure of PS No. 9 was the presence of water inside the motor termination compartment where the moisture sensor is located. The Discharger stated that it was likely that water had covered the termination boxes on several occasions and that the lack of sealed watertight connections contributed to water migrating down the power cords inside the insulated conductors to the pump motors and moisture sensors. Therefore, the pumps automatically shut down at different times during the SSO event, because of high moisture content.

At 8:45 a.m. on December 27, 2004, the Discharger attempted to restart the pumps and was successful at various times but all four pumps eventually shut down after excessive moisture was detected. Ultimately, the Discharger decided to bypass the sensors that triggered automated shut down for three of the four pumps. This decision may have resulted in burning out the new pumps, but the Discharger determined that this was better than prolonging the SSO. In addition, this decision was significant as the construction project had not yet been accepted by the Discharger and may have voided the warranties on the new expensive submersible pumps. At 11:25 a.m. (after 3 hours and 20 minutes), the SSO was abated by two "jumped" electric pumps operating at 95 percent capacity and were capable of operating at a combined capacity of approximately 13 MGD. For emergency standby pumping capacity, the Discharger placed three diesel pumps that were obtained one hour into the SSO event nearby in case the electric pumps failed.

The SSO ceased at 11:25 a.m. on December 27, 2004. The estimated volume of un-recovered sewage overflow was 1,805,600 gallons. The Discharger posted signage along 1500 feet of Colma Creek advising that the creek was closed to recreational contact. However, it is unclear if the signage was posted because of this SSO event, or because of a prior SSO event. During and after the overflow event, treatment plant staff visually inspected the waters and shoreline of Colma Creek checking for evidence of grease, solids, etc. The Discharger reports that there was no evidence of negative impact to the shoreline, nor to the wildlife feeding along the shoreline. They also report no evidence of fish kill during or after the event.

All of the other large SSOs occurring on December 27, 2004, listed in Table 1, are directly related to the failure of PS No. 9. When PS No. 9 failed, the sewage backed-up within the collection system and subsequently overflowed out of manholes located on Victory Avenue, Cypress Avenue, Lowrie Avenue and South Maple Avenue. It is possible that the estimated 1.8 MG includes the spill volumes from these manholes.

The gravity of the violations associated with all 147 SSOs is significant, as the discharges did not receive adequate treatment to protect the beneficial uses of Colma Creek and San Francisco Bay. The gravity of the violations is also significant because of the lack of initial dilution. These undiluted discharges resulted in elevated pollutant levels in the receiving water at the point of discharge. It is

unknown as to what extent the discharges may have impaired the beneficial uses of the receiving water.

Susceptibility of the Discharge to Cleanup or Abatement

Due to the strong storm event, the Discharger's ability to perform cleanup activities was very limited for the estimated 1.8 MG discharge of the December 27, 2004, SSO. Because of the large amount of storm water, the diluted sewage was quickly flushed out of Colma Creek and further diluted before it reached San Francisco Bay by storm drains and runoff from San Bruno Slough, which enters Colma Creek downstream of PS No. 9. Rainfall of 1.15 inches was reported to have fallen between 12:01 a.m. and 12:30 p.m. at the South San Francisco/San Bruno Water Quality Control Plant on December 27, 2004. This rainfall amount equates to a two-year storm event ("Rainfall Analysis for Drainage Design," California Department of Transportation, October 1976). Some solids, such as grease balls and rags, remained on the ground at the construction site after the flow was abated. The Discharger cleaned up the pump station construction site by scraping the top layer of soil with construction equipment and the contaminated dirt was removed to a sanitary disposal site. Portions of the contaminated pumping station structures were rinsed with fresh water and that water was pumped to the wastewater treatment plant.

As for the other SSOs that occurred during dry weather, it is possible to (and many other sewage collection agencies can) contain and re-capture a large percentage of spilled sewage. For example, the Central Contra Costa Sanitary District re-captured 65% of all of its spills from 2000-2004. The Discharger cannot provide documentation of SSO re-captured volumes. The Discharger stated that its response crews have a clean-up procedure that is performed on all SSOs; however, it is not written in any Standard Operating Procedure (SOP). Without any written SOP, the cleanup and response will be inconsistent, and it is likely that has lead to more untreated discharges not being cleaned up.

Degree of Toxicity of Discharge

It is difficult for Water Board staff to assess the direct impacts of these discharges accurately. However, raw sewage, as compared to properly treated wastewater, typically has about ten times the concentrations of biochemical oxygen demand, trash, total suspended solids, oil and grease, ammonia, and thousands of times the levels of bacteria (which is measured in terms of total and fecal coliform) and viruses. These pollutants exert varying levels of impact on water quality, and, as such, may adversely affect beneficial uses of receiving waters to different extents. Some possible adverse effects on water quality and beneficial uses as a result of sewage overflows include:

- Adverse impact to fish and other aquatic biota caused by bio-solid deposition and oil and grease;
- Creation of a localized toxic environment in the water column as a result of the discharge of oxygen-demanding pollutants that lower dissolved oxygen, and elevated ammonia concentration which is a demonstrated fish toxicant at low concentrations; and
- Impairment to water contact recreation and harm to fish and wildlife as a result of elevated bacteria levels including pathogens.

Ability to Pay and Ability to Continue Business

The Discharger's annual operating budget for sewage collection and treatment is approximately $12,000,000, and it has expended $95,000,000 in capital improvement projects over the past ten years. Water Board staff considers that the recommended ACL amount will not seriously jeopardize the Discharger's ability to continue operations.

Voluntary Cleanup Efforts Undertaken

The Discharger did not perform any cleanup efforts of the December 27, 2004, SSO other than the pump station construction site. The Discharger does not attempt to re-capture any SSOs even though it owns a vactor truck. Many other sewage collection agencies use a vactor truck to re-capture as much of the SSO as possible to minimize the SSO impacts.

The Discharger does not have any written/established SOPs to respond to SSOs. As such, the Discharger does not have any written procedures for containing an SSO and preventing the SSO from entering storm drains and surface waters. One possible result would be slow or inconsistent response to SSOs, which leads to larger SSOs and thus greater impact to water quality. In addition, the Discharger's unwritten procedure has its clean-up crews using chlorinated water (e.g., from a garden hose) to clean-up the SSOs when dechlorinated water should be used. This can be harmful to receiving waters as chlorine has been demonstrated to be toxic to fish.

In 2005, the Discharger had 107 SSOs, none of which had documentation that any recapturing efforts were undertaken. The volume of these SSOs was 18,594 gallons.

Prior History of Violations

The Discharger has a long history of SSO problems. On August 20, 1997, the Water Board adopted Cease and Desist Order (CDO) No. 97-104, requiring the Discharger to cease and desist from discharging waste contrary to the requirements of its NPDES Permit. The basis of this CDO was the insufficient capacities of the existing collection, treatment, and outfall systems, evidenced particularly during wet weather conditions of high storm water inflow and/or high groundwater infiltration rates. The CDO set forth a provision and time schedule to eliminate the prohibited discharges and violations of effluent limits. Provisions included improvements to the Discharger's Water Quality Control Plant and improvements to the collection system. In general, the Discharger is on track with the CDO requirements and should meet the final compliance deadline of November 1, 2007. However, compliance with the CDO does not relieve the Discharger from complying with its NPDES permit prohibition of the discharge of untreated or partially treated wastewater to waters of the State from its collection system or pump stations.

On October 19, 2004, an estimated 1.5 million gallons of rain-diluted sewage overflowed and flooded several low lying areas of South San Francisco. This SSO was caused by the actions of another agency. Therefore, the Discharger is not responsible for this SSO event because the actions of the other agency was out of its control.

Degree of Culpability

The failure of PS No. 9 was because the four newly installed pump motors faulted which lead to the pumps automatically shutting down. The pumps faulted due to the detection of excessive moisture within the motors. Therefore, the December 27, 2004, SSO could have been averted if the pumps and termination boxes were properly installed. The Discharger owns, operates and maintains the sewer collection system that was responsible for the SSOs. Thus, the Discharger is culpable for the December 27, 2004, SSO and the other 146 SSOs listed in Table 1.

Economic Savings

The economic benefit to the Discharger amounts to the interest and/or income earned from capital investments that would have otherwise been spent on the proper management of the collection system to comply with the waste discharge requirements. However, in this case, the Discharger is currently under a CDO, which required the Discharger to make improvements to its sewage collection system. The Discharger has completed many studies and made over $21,000,000 in improvements to its system as a result of complying with the CDO. Therefore, there was likely little or no economic benefit in preventing these violations from occurring.

There would be some savings from the Discharger not having developed written SOPs for SSO spill response. These savings include not having the proper equipment to cleanup and re-capture the SSOs, such as plugs for storm drains and covers for storm drain inlets to prevent and minimize SSOs from reaching surface water. There are also savings from the man-hours that would be used to deploy this equipment. Savings are also incurred by not using dechlorinated water to cleanup SSOs. For example, the Stege Sanitary District uses a hydrojetter truck, which has the ability to store 1,000 gallons of dechlorinated water that is used to clean up SSOs and flush storm drains. This truck costs approximately $100,000. The Discharger uses a vactor truck to clean any blockages in its collection system prior to the wet weather season to prevent any backups from occurring. However, the vactor truck is not used in cleaning up SSOs which is another cost savings. The Discharger's savings are hard to quantify but are significant.

Other Matters as Justice May Require

The Discharger has been cooperative and responsive to concerns raised by Water Board staff about these SSOs and their investigation.

During the period of May 1, 2003, through March 1, 2006, the Discharger had 122 other SSOs, each of which was less than 100 gallons. Many of these SSOs were associated with sewage backups that discharged through cleanouts. Since the Discharger did not maintain records of the exact volumes or duration of these discharges, the total volume from these 122 SSOs is not included in the 1,991,514 gallons.

Seventeen businesses filed claims against the Discharger for damages as a result of the flooding and sewage backups encountered as a result of the December 27, 2004, pump station failure, totaling approximately $120,000.

The Water Board adopted Resolution No. R2-2005-0059 that declares support of local programs that inspect and rehabilitate private sewer laterals. The Resolution also states that the Water Board would consider the existence of such programs, especially those experiencing significant infiltration and inflow from private sewer laterals, as an important factor when considering enforcement actions for SSOs. The Discharger does not currently have a program that inspects and rehabilitates private sewer laterals.

Staff time to prepare the Complaint and supporting evidence is estimated to be 160 hours. Based on an average cost to the State of $100 per hour, the total cost is $16,000.

8. Based on the above factors, the Executive Officer proposes civil liability be imposed on the Discharger in the amount of $516,000 for the violations cited above, which includes $16,000 in staff costs, and is due as provided below.

9. This action is an enforcement action and is, therefore, exempt from the California Environmental Quality Act, pursuant to Title 14, California Code of Regulations, Section 15321.

10. The Discharger can waive its right to a hearing to contest the allegations contained in this complaint by (a) paying the civil liability in full or (b) undertaking an approved supplemental environmental project in an amount not to exceed $484,000 and paying the remainder of the civil liability, all in accordance with the procedures and limitations set forth in the attached waiver.

4/17/06
Date

Bruce H. Wolfe
Executive Officer

Attachment: Waiver of Hearing Form

WAIVER

If you waive your right to a hearing, the matter will be included on the agenda of a Water Board meeting but there will be no hearing on the matter, unless a) the Water Board staff receives significant public comment during the comment period, or b) the Water Board determines it will hold a hearing because it finds that new and significant information has been presented at the meeting that could not have been submitted during the public comment period. If you waive your right to a hearing but the Water Board holds a hearing under either of the above circumstances, you will have a right to testify at the hearing notwithstanding your waiver.

☐ Waiver of the right to a hearing and agreement to make payment in full.
By checking the box, I agree to waive my right to a hearing before the Water Board with regard to the violations alleged in Complaint No. R2-2006-0012 and to remit the full penalty payment to the State Water Pollution Cleanup and Abatement Account, c/o Regional Water Quality Control Board at 1515 Clay Street, Oakland, CA 94612, within 30 days after the Water Board meeting for which this matter is placed on the agenda. I understand that I am giving up my right to be heard, and to argue against the allegations made by the Executive Officer in this Complaint, and against the imposition of, or the amount of, the civil liability proposed unless the Water Board holds a hearing under either of the circumstances described above. If the Water Board holds such a hearing and imposes a civil liability, such amount shall be due 30 days from the date the Water Board adopts the order imposing the liability.

☒ Waiver of right to a hearing and agree to make payment and undertake an SEP.
By checking the box, I agree to waive my right to a hearing before the Water Board with regard to the violations alleged in Complaint No. R2-2006-0012, and to complete a supplemental environmental project (SEP) in lieu of the suspended liability up to $484,000 and paying the balance of the fine to the State Water Pollution Cleanup and Abatement Account (CAA) within 30 days after the Water Board meeting for which this matter is placed on the agenda. I understand that the SEP proposal shall conform to the requirements specified in Section IX of the Water Quality Enforcement Policy, which was adopted by the State Water Resources Control Board on February 19, 2002, and be subject to approval by the Executive Officer. If the SEP proposal, or its revised version, is not acceptable to the Executive Officer, I agree to pay the suspended penalty amount within 30 days of the date of the letter from the Executive Officer rejecting the proposed/revised SEP. I also understand that I am giving up my right to argue against the allegations made by the Executive Officer in the Complaint, and against the imposition of, or the amount of, the civil liability proposed unless the Water Board holds a hearing under either of the circumstances described above. If the Water Board holds such a hearing and imposes a civil liability, such amount shall be due 30 days from the date the Water Board adopts the order imposing the liability. I further agree to satisfactorily complete the approved SEP within a time schedule set by the Executive Officer. I understand failure to adequately complete the approved SEP will require immediate payment of the suspended liability to the CAA.

TERRY WHITE
Name (print)

Signature

MAY 17, 2006
Date

DIRECTOR OF PUBLIC WORKS
Title/Organization